

1-9. (CANCELED)

10. (NEW) A two-stage planetary gear set (1) having one input shaft (2) and one output shaft (3), one sun gear (8), one ring gear (11), one planet carrier (10) with planetary gears (5), one transmission housing (6) and one electromagnetic selection device having one sliding sleeve (14) for switching a first gear in which the ring gear (11) can be coupled with the housing (6) and a second gear in which the ring gear can be coupled with the sun gear (8). The sliding sleeve (14) being displaceable by means of one electromagnet consisting of magnet coils (22, 23) and one armature (24), the armature (24) is situated rotatably but axially fixed upon the sliding sleeve (4).

11. (NEW) The planetary gear set according to claim 10, wherein the armature (24) is designed as an annular part and is fastened by means of one bearing (19) upon the sliding sleeve (14).

12. (NEW) The planetary gear set according to claim 10, wherein the magnet coils (22, 23) are located within the transmission housing (6).

13. (NEW) The planetary gear set according to claim 11, wherein the armature (24) has one outer and, axially offset, one inner slope (24a, 24b) with which can be coordinated one outer and one inner armature counterpart (26, 25), the armature slopes and armature counterpart each forming one sliding cone.

14. (NEW) The planetary gear set according to claim 13, wherein an angle (α) of the armature slopes or of the cone amounts to about 3 degrees.

15. (NEW) The planetary gear set according to claim 13, wherein the armature slopes (24a, 24b) are delimited by annular front faces (24c, 24d) which act as stop surfaces for terminal positions of the armature (24).

16. (NEW) The planetary gear set according to claims 11, wherein the magnet coils (22, 23), the armature (24) with a bearing (19), the sliding sleeve (14), and the armature counterparts (25, 26) are accommodated in one magnet body (27) which is designed as a front-mounted structural part (30) and can be inserted in the transmission housing (6).

17. (NEW) The planetary gear set according to claim 16, wherein on one front side (27c) of the structural unit (30) is situated one brake disc (18) provided with one inner coupling gearing (17) which together with the structural unit (30) is fastened in the transmission housing (6).

9 ✓ 18. (NEW) The planetary gear set according to claim 10, wherein the electromagnetic selection device has one electromagnetically actuatable locking unit with a fastening unit (20) and locking bolts which engage in grooves of the sliding sleeve (14) and retain the sliding sleeve in a switch position.